

REMARKS

Reconsideration and allowance of this application are respectfully requested in light of the above amendments and the following remarks.

Claims 25, 26, 30-33, 40, 42, and 44-46 have been amended, and claims 47 and 48 have been cancelled. Claims 49-53 have been newly added. The cancellation of claims 47 and 48 obviates the indefiniteness rejections applied thereto and the objection applied to claim 48. Support for the amendments is provided for example in the original claims, Fig. 5, and the specification on page 8, second paragraph, page 13, fourth paragraph, page 14, fourth paragraph, page 23, fourth paragraph, and page 24, third paragraph.

Claims 25-38, 40, and 43-48 were rejected, under 35 USC § 103(a), as being unpatentable over Lakshmi Narayanan et al. (US 2003/0103496) in view of Prehofer (US 2006/0099952). Claim 39 was rejected, under 35 USC § 103(a), as being unpatentable over Lakshmi Narayanan et al. (US 2003/0103496) in view of Prehofer (US 2006/0099952) and Trossen et al. (US 2003/0204599). Claims 41 and 42 were rejected, under 35 USC § 103(a), as being unpatentable over Lakshmi Narayanan et al. (US 2003/0103496) in view of Prehofer (US 2006/0099952) and Bossoli et al. (US 2004/0233866). To the extent these rejections may be deemed applicable to the amended claims, the Applicants respectfully traverse based on the points set forth below.

Claim 25 now defines a method for context transfer in which a context transfer manager that is common to a plurality of heterogeneous access networks: (1) determines neighboring access networks based on received location information and (2) transmits a context to each of the determined neighboring access networks and a mobile terminal. The claimed subject matter reduces the number of trust entities and the amount of overhead traffic required to execute a

context transfer (see specification page 5, penultimate paragraph, through page 6, third paragraph). (References herein to the specification and drawings are for illustrative purposes only and are not intended to limit the scope of the invention to the referenced embodiments.)

Narayanan fails to disclose a context transfer manager that is common to a plurality of heterogeneous access networks. Instead, Narayanan discloses, in Fig. 3, that each autonomous system (AS) AS1, AS2 has its own access router (AR) AR1, AR2 and that each of AR1 and AR2 handles a context solely for its respective access network (see Narayanan paragraphs [0071]-[0081]). And Prehofer is not cited in the Office Action for supplementing the teachings of Narayanan in this regard.

Moreover, the Office Action proposes that Narayanan discloses transmitting a context to each of neighboring access networks determined by a context manager (see Office Action page 4, lines 1-2). However, the Office Action acknowledges that Narayanan does not disclose a context manager that determines neighboring access networks (see page 4, fourth paragraph). Because Narayanan does not disclose a context manager that determines neighboring access networks, it necessarily follows that Narayanan cannot disclose transmitting a context to each of the neighboring access networks determined by a context manager. And Prehofer is not cited for supplementing the teachings of Narayanan with respect to the Applicants' claimed subject matter of transmitting a context to each of the neighboring access networks determined by a context manager.

Furthermore Narayanan does not disclose the claimed subject matter of a context transfer manager that transmits a context to a mobile terminal. Instead, Narayanan discloses transferring context information among ARs and policy servers (PSs) (see Narayanan paragraphs [0071]-

[0081]). Prehofer is not cited in the Office Action for supplementing the teachings of Narayanan in this regard.

Accordingly, the Applicants submit that the teachings of Narayanan and Prehofer, considered individually or in combination, do not render obvious the subject matter now defined by claim 25. Independent claim 46 similarly recites the above-mentioned subject matter distinguishing method claim 25 from the applied references, but with respect to an apparatus. Independent claim 49 recites a mobile terminal that receives a context communicated by a context transfer manager and distinguishes over the applied references for the reason identified in the immediately preceding paragraph. Therefore, it is submitted that the rejections applied to claims 39, 41, and 42 are obviated and allowance of claims 25, 46, and 49 and all claims dependent therefrom is warranted.

The Applicants further note that the Office Action fails to identify a reason why a skilled artisan would find motivation to modify Narayanan's system in light of Prehofer's teachings so as to achieve the claimed subject matter (i.e., the Office Action's proposal that "[m]otivation to combine may be gleaned from the prior art" does not satisfy the evidentiary standard required to support an obviousness rejection). Thus, the Office Action has not established a *prima facie* case of obviousness under 35 USC § 103(a) and allowance of the claims is warranted for this independent reason.

To promote a better understanding of the patentable distinctions of the Applicants' claimed subject matter over the teachings of the applied references, the Applicants provide the following additional remarks.

Narayanan relates to a policy-based target router selection and context transfer (see Narayanan paragraphs [0019] and [0024]). Narayanan describes two types of handover and

context transfer mechanisms. The main design concepts of Narayanan are listed in paragraphs [0025]-[0031]. The most important design aspect appears to be the balancing of the functionalities between the policy server (PS) and the access router (AR) that are provided in individual so-called autonomous systems (AS). This allows the access router to focus on performing its main duties, i.e., to route Internet Protocol (IP) packets and to be freed from the target router selection process and most of the context transfer process. Furthermore, the second important feature of the teaching of Narayanan is to perform an authorization of the mobile node prior to handover, so as to avoid the problem of blind radio resource allocation.

As described in paragraphs [0034]-[0036], it is assumed that the static capabilities of the mobile node are stored in a AAA server. The policy server (PS) can retrieve this information on the static capabilities of the individual mobile nodes from the AAA server of the mobile node home network.

The dynamic capabilities are kept with the access router (AR) that is currently serving the mobile node. When the mobile node moves towards another autonomous system, it receives identification information on a broadcast channel which may contain link layer information of a second base station or IP address of the access router or autonomous system number associating some link local address or a combination of information. As stated in paragraph [0035], the mobile node forwards this information to its current access router.

In a first step, the access router selection process is performed where the policy server computes a list of possible access routers that may serve the mobile node and the mobile node is informed of this list by the policy server in its own domain. The second step involves the actual context transfer (see Narayanan paragraph [0036]).

Concerning the selection of the access router prior to handover, the mechanism is based on the mobile node first receiving new identifiers from more than one base station through a broadcast channel. The mobile node forwards the information to the access router currently serving it, which again forwards this information to the policy server in the local autonomous system (see paragraph [0039]).

Paragraphs [0040]-[0043] of Narayanan relate to Fig. 1. In case the policy server of the current autonomous system receives only a link layer identifier from the mobile node, it checks first with the policy database to see whether an intra-domain handover is to be performed or not (i.e., a handover within the autonomous system). If not, the policy server checks with the neighboring autonomous systems defined in the policy database and "forwards to their neighboring policy server." However, Narayanan does not describe which information is forwarded to "their neighboring policy server."

If the autonomous system number is provided from the mobile node via the access router to the policy server, the policy server appears to forward this information to the policy server of the autonomous system identified by the autonomous system number together with the mobile node static capability as retrieved from the AAA server (see Narayanan paragraph [0041]).

If the policy server in the destination autonomous system receives the information from the policy server within the autonomous system where the mobile node is currently located, the policy server of the destination autonomous system determines whether the autonomous system can potentially serve the mobile node. If so, the policy server in the destination autonomous system computes the candidate access routers that will be able to serve the mobile node and returns the computed list of access routers to the policy server of the autonomous system where the mobile node is currently located (see paragraph [0042]).

If the mobile node provides more than one autonomous system number, the local policy server of the autonomous system where the mobile node is currently located performs the above steps for each autonomous system. Upon retrieval of the computed access routers that can serve the mobile node from the policy servers in the destination autonomous system or systems, the compiled list of access routers is provided to the mobile node (see paragraph [0043]).

As outlined in paragraph [0057], the mobile node can perform two types of handovers, namely reactive and proactive. In the reactive handover, the mobile node informs the new access router to pick up its context from the old access router. In the proactive handover, the mobile node forwards the new access router's identity to the old access router and informs the old access router to context the new access router prior to the handover.

Paragraphs [0074]-[0081] teach that the policy server of the current autonomous system receives the context from the access router which has received a context transfer request from the mobile node. The policy server adds to the context received from the access router the static context of the mobile node that is available at the policy server from the AAA server. In addition, the policy server currently serving the mobile node in the local autonomous system may collect "other dynamic context from the other network elements." For example, the mobile node may have a security context associated with a gateway, which appears to be considered dynamic context within Narayanan.

It is apparent that the teachings of Narayanan are not related to the Applicants' claimed subject matter.

First of all, unlike the invention of claim 25, Narayanan does not teach a method for a context transfer in a communication network comprising a plurality of heterogeneous access networks. Narayanan only refers to an intra-domain handover and an inter-domain handover,

i.e., handover within a single autonomous system or from one autonomous system to another autonomous system. However, Narayanan fails to disclose that different access technologies are used in the different autonomous systems.

In contrast to the invention of claim 25, Narayanan fails to teach a "context transfer manager ... common to the plurality of heterogeneous access networks in the communication network" and that all steps of the claimed method are performed by this single common context transfer manager. Furthermore, Narayanan fails to teach that the "context transfer manager common to the plurality of heterogeneous access networks performs the context transfers related to said mobile terminal." As discussed in the summary of Narayanan, different policy servers and access routers are involved in the handover and context transfer procedure.

Narayanan further fails to teach "generating by the context transfer manager at least one context for ... the mobile terminal" and "transmitting by the context transfer manager a context to ... the mobile terminal." In Narayanan, no context is generated for the mobile terminal by the context transfer manager and transmitted to the mobile terminal.

Furthermore, unlike the invention of claim 25, Narayanan does not teach that "the generation of the at least one context is based on ... capabilities and parameters of the neighboring access networks taking into account the respective access technology." As outlined above, there is no mentioning of the different autonomous systems using different access technologies in Narayanan. Therefore, Narayanan cannot teach that any aspects of the access technology used in the neighboring access networks would somehow influence the generation of a context. The generic reference to the policy server that may collect other dynamic context from other network elements, as provided in paragraph [0076], is not relating to the policy server collecting information, taking into account the respective access technology in neighboring

access networks; instead it relates to security aspects of the mobile node being considered in the context generation.

Prehofer is related to a proactive handover decision mechanism in view of a so-called "operational context of the mobile device" (see Prehofer, abstract and paragraph [0011]). As becomes apparent, for example, from paragraph [0015] or [0079], the "operational context" essentially corresponds to the detection of a current movement pattern of the mobile device or its current location (see paragraphs [0129] and [0030]). Also, Prehofer does not relate to a handover mechanism for use in a heterogeneous network (see paragraph [0080]).

Overall, the teachings of Prehofer are not sufficient to show the Applicants' claimed features that are absent from Narayanan's disclosure. If considering to combine the teaching of Prehofer and Narayanan, a skilled person would consider the teaching of Prehofer in designing and optimizing the choice of the target access router within a target autonomous system in response to receiving a context transfer request from the mobile node. However, the teachings of Prehofer do not relate to or motivate the use of only a single context transfer manager common to a plurality of heterogeneous access networks in a communication network that performs the context transfers related to the mobile terminal.

Furthermore, Prehofer fails to teach that the capabilities and parameters of the neighboring access networks, taking into account the respective access technology, is considered in the generation of the context by the context transfer manager.

Finally, both Prehofer and Narayanan fail to indicate that the generated context is provided from the common context transfer manager to the mobile node, as explicitly recited in the Applicants' claimed subject matter.

In view of the above, it is submitted that this application is in condition for allowance, and a notice to that effect is respectfully solicited.

If any issues remain which may best be resolved through a telephone communication, the Examiner is requested to telephone the undersigned at the local Washington, D.C. telephone number listed below.

Respectfully submitted,

/James Edward Ledbetter/

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